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ORGAN DONOR MANAGEMENT SYSTEM

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Abstract : Organ donation is that the donation of biological tissue or associate degree tissue of the organic structure, from a living or dead soul to a living recipient in would like of a transplantation. Transplantable organs and tissues are detached in a surgical procedure following a determination, based on the donor's medical and social history, of which are suitable for transplantation. Without quick and timely access to donor records, creating market strategies for organ donation, lobbying and sensitization of organ donors becomes very difficult. The organ management data system offers functionalities to quick access to donor records collected from various parts of the country. In the other kinds of donations, it mainly collects the donations of the donors and deliver them to the respective organizations and provide the information to the respective doctors of that organization to maintain transparency. To manage the donor registration and user maintenance. People who interested can register themselves through this system. The main aim is aggregation the donations and delivering them to the individual organizations and also provide the information to the doctors of that organization Organ Donation App.

Index Terms - Donor, Transparency, Transplantable organs

I. INTRODUCTION

This paper presents a good quality framework to cross over any barrier between the blood benefactors, the individuals deprived of, and keen on blood and organ donation. Blood donation is one of the most generous and critical commitments an individual can make to the society. It doesn't hurt a human to donate blood. The donor's body can recover blood within a few weeks. Sri Lanka is considered as one of the leading models to other regional developing countries which have achieved strides in the area of blood transfusion in the Asia region. At present, the blood print storage is managed by the National Transfusion Service, which is popularly known as the central blood bank. It is the sole supplier of blood and blood-related products to all government hospitals and most private sector hospitals. There are 101 hospital based blood banks and two independent blood centers affiliated with 19 cluster centers based on geographical distribution. The overall blood transfusion service in Sri Lanka has been recognized and content several times. Nevertheless, there is room for development and endeavoring for service excellence in areas of blood and organ donation management.

'Life Share' system is a web application through which listed users can check accessibility/availability of their blood requirement. As and when required, users can also send online requests for blood to the contributor, thus to coordinate with regard to blood necessity. Other than these, the proposed system automates the matching of blood groups through a special location tracking group that is integrated to an online/cloud platform. Currently, blood banks in some private hospitals do not have in place, such an progressive and integrated system, as such, it is expected to introduce the new online system for blood banks of Asiri Hospital, Lanka Hospitals, Durdans Hospital. Another point is that an effective organ transplant system in local

healthcare sector is at an infant stage with drawbacks, and yet to be improved. Also, this investigate seeks to classify the level of awareness/knowledge, attitude, transparency and commitment among people by sending notifications to user's account about special notices, system generated user friendly questionnaires and news updates. An additional feature is sharing of blood and organ requests in social media or via short message systems (SMS) to spread the message through the society.

Finally using all these techniques, this proposed platform will provide a highly efficient and productive service to people.

II. EXISTING SYSTEM

Our project is mainly focused to provide the services to the needy through a single submission and make the donation process easy. In this donation the donor can easily reach the needy through the consent of the admin. In the other kinds of donations, it mainly collects the donations of the donors and deliver them to the respective organizations and provide the information to the respective doctors of that organization to maintain transparency. To manage the donor registration and user maintenance. People who interested can register themselves through this system. The main aim is collecting the donations and transporting them to the respective organizations and also deliver the information to the doctors of that organization.

III. PROPOSED SYSTEM

In this we preserve all kinds of essential donations to the needy under single portal and providing contributions to needy. organizations and also provides the information to the volunteers of that organization to maintain transparency. Moreover, the system could be designed in such a way to exchange information with the other tools and take into account their results, producing a result which is already suitable under the three points of opinion. Even in the case of multiple organs to be assigned, the process would turn out to be more efficient, since different software tools could work in parallel substituting human beings and producing results with less cost in term of human resources involved.

IV. SOFTWARE ENVIRONMENT

Software Environment

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. Google Inc. purchased the initial designer of the software, Android Inc., in 2008.

Android's mobile operating system is based on the Linux kernel. Google and other members of the Open Handset Alliance collaborated on Android's development and release.

The Android Open-Source Project (AOSP) is tasked with the maintenance and further development of Android. The Android operating system is the world's best-selling Smartphone platform.

The Android SDK delivers the tools and APIs necessary to begin developing applications Android stand using the Java programming language. Android has a large community of developers writing submissions ("apps") that extend the functionality of the devices. There are currently over 250,000 apps available for Android.

Features: -

- **Application framework** enabling reuse and replacement of components
- **Dalvik virtual machine** optimized for mobile devices
- **Integrated browser** based on the open source Web Kit engine
- **Optimized graphics** powered by a custom 2D graphics library; 3D graphics based on the OpenGL ES 1.0 specification (hardware acceleration optional)
- **SQLite** for structured data storage
- **Media support** for common audio, video, and still image formats (MPEG4, H.264, MP3, AAC, AMR, JPG, PNG, GIF)
- **GSM Telephony** (hardware dependent)
- **Bluetooth, EDGE, 3G, and WiFi** (hardware dependent)

- **Camera, GPS, compass, and accelerometer** (hardware dependent)
- **Rich development environment** including a device emulator, tools for debugging, memory and performance profiling, and a plugin for the Eclipse IDE

Android Architecture

Libraries

Android includes a set of C/C++ libraries used by various components of the Android system. These capabilities are exposed to developers through the Android application framework. Some of the core libraries are listed below:

- **System C library** - a BSD-derived implementation of the standard C system library (libc), tuned for embedded Linux-based devices
- **Surface Manager** - manages access to the display subsystem and seamlessly composites 2D and 3D graphic layers from multiple applications
- **LibWebCore** - a modern web browser engine which powers both the Android browser and an embeddable web view
- **SGL** - the underlying 2D graphics engine
- **FreeType** - bitmap and vector font rendering
- **SQLite** - a powerful and lightweight relational database engine available to all applications

Android Runtime

Android includes a set of core libraries that provides most of the functionality available in the core libraries of the Java software design language.

Every Android application runs in its own process, through its own instance of the Dalvik virtual machine. Dalvik has been written so that a device can run multiple VMs efficiently. The Dalvik VM executes files in the Dalvik Executable (.dex) format which is optimized for minimal memory footprint. The VM is register-based, and runs classes compiled by a Java language compiler that have been transformed into the .dex format by the included "dx" tool.

The Dalvik VM relies on the Linux kernel for underlying functionality such as threading and low-level memory management.

Linux Kernel

Android relies on Linux version 2.6 for core system services such as security, memory management, process management, network stack, and driver model. The kernel also acts as an abstraction layer between the hardware and the rest of the software stack.

The Linux kernel is an operating system kernel used by the Linux family of Unix-like operating systems. It is one of the most prominent examples of free and open source software.

The Linux kernel is released under the GNU General Public License version 2 (GPLv2), (plus some firmware images with various licenses), and is developed by Contributors Worldwide. Day-to-day development takes place on the Linux kernel mailing list.

The Linux kernel was initially conceived and created by Finnish computer science student Linus Torvalds in 1991. Linux rapidly accumulated developers and users who adapted code from other free software projects for use with the new working system. The Linux kernel has established contributions from thousands of programmers.[10] Many Linux distributions have been unrestricted created upon the Linux kernel.

The Linux kernel has extensive support for and runs on many virtual machine constructions both as the multitude operating system and as a guest operating system. The virtual machines usually emulate Intel x86 family of processors, though in a few

cases PowerPC or ARM processors are also emulated.

At Google, the team led by Rubin developed a mobile device platform powered by the Linux kernel. Google marketed the platform to handset makers and carriers on the premise of providing a flexible, upgradable system. Google had lined up a series of hardware module and software partners and signaled to carriers that it was open to various degrees of collaboration on their part.

Speculation about Google's intention to enter the mobile infrastructures market continued to build through December 2006. Reports from the BBC and The Wall Street Journal noted that Google wanted its search and applications on mobile phones and it was working hard to deliver that. Print and online media outlets soon reported rumors that Google was developing a Google-branded handset. Some speculated that as Google was defining technical specifications, it was showing prototypes to cell phone producers and network operators. Android applications are packaged in .apk format and stored under /data/app folder on the Android OS (the folder is accessible to root user only for security reasons). APK package covers .dex files (compiled byte code files called Dalvik executables), resource files, etc.

VI. CONCLUSION

Here we planned an application which is useful to all organ donors to donate their organs and blood. The main aim of this app is to save many peoples who are suffering through organ damage.

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